

THE IMPACT OF TRAINING AND EQUIPMENT AT THE BATTLE OF ATTU,
ALEUTIAN CAMPAIGN – HISTORICAL STUDY
AND CURRENT PERSPECTIVE

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General Studies

by

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

THE IMPACT OF TRAINING AND EQUIPMENT AT THE BATTLE OF ATTU,
ALEUTIAN CAMPAIGN – HISTORICAL STUDY AND CURRENT PERSPECTIVE,
by Major Joshua D. Walters, 70 pages.

In the Aleutian Campaign of 1942-1943, the United States of America fought the only land battle against an invading nation on American territory during the past 100 years at the Battle of Attu. The 7th Infantry Division based out of Fort Ord, California was tasked by the War Department for the main offensive element. Initial battle plans called for a three-day operation to retake the island; unfortunately for the soldiers, the battle lasted twenty-two days. During the prolonged battle, the cold injury and wounded-in-action rates were nearly identical. This study explores the impact of inadequate training and ineffective equipment on the 7th ID soldiers whose previous focus on North Africa shifted to the North Pacific with less than three months for preparation. This study will also discuss current relevance of the lessons learned regarding the United States Arctic Strategy.

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ACRONYMS

ID	Infantry Division
IJN	Imperial Japanese Navy
JANPC	Joint Army Navy Planning Committee
WPD	War Plans Department

ILLUSTRATIONS

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CHAPTER 1

INTRODUCTION

By failing to prepare, you are preparing to fail.

— Benjamin Franklin

The Central Pacific Theater of World War II often overshadows the North Pacific Theater, contributing to its nickname of “forgotten” or “silent” war. During the Aleutian Campaign of 1942-1943 at the Battle of Attu, the United States of America fought the only land battle on American territory against an invading nation in the past 100 years. Japanese troops seized control of Attu Island on the morning of June 7, 1942. Nearly a year later, on May 11, 1943 the 7th Infantry Division, based out of Fort Ord, California began an assault to reclaim the remote island.¹ The purpose of this study is to examine how training and cold-weather equipment impacted tactical operations for the 7th Infantry Division at the Battle of Attu. The staggering fact is that in twenty-two days of combat, the 7th Infantry Division sustained 3,829 casualties of which 1,200 (31 percent) were due to the cold.²

After the battle, leaders and planners who looked back on the operations concluded that the soldiers were unprepared and ill-equipped for operations in the Aleutians. Upon reflection of the soldiers from the Battle of Attu, a naval officer stated, “Willing to fight but . . . poorly prepared, badly equipped, and just pitiful.”³ The men who survived the battle described the harsh, severe weather conditions; their clothing and equipment proved unsatisfactory to this extreme environment. The clothing provided little warmth, was not windproof or waterproof, and the leather boots were totally

inadequate; all contributed to soldiers' susceptibility to cold-weather exposure and trench foot during the Battle of Attu.⁴

Two officers who survived the Battle of Attu went on to write about their experiences, LTC J. G. Bennett while serving at CGSC in 1946-1947, and MAJ R.O. English at Advanced Infantry Officer Class No 1 in 1949-1950. These officers discuss some of the challenges regarding the personnel equipment and training. LTC Bennett stated that they shipped out with "GI clothing not designed or tested for the area of operation" so they had to improvise.⁵ MAJ English wrote in his final criticism that "the lack of mountain training was a definite shortcoming in the efficiency of the unit, particularly in movement and supply techniques."⁶

The research questions are: What training was conducted to prepare the 7th Infantry Division at Fort Ord for Arctic conditions in the Aleutians? What cold-weather equipment was considered, issued, and/or supplied for living and fighting in the Aleutians? What was the result of training and equipment on Battle of Attu? What were the second and third order effects after the Battle of Attu? Although this battle took place over seventy years ago, there is sufficient documentation in the U.S. Army archives to answer these questions.

To frame the research, it is important to have an overview of terrain and weather in the Aleutian chain as a base of consideration for equipment and training. The Aleutian Islands, acquired in 1867 as part of the Alaska Purchase from Russia, extend 1,000 miles west from the Alaska mainland. The islands significant to this research are the islands (from west to east) of Attu, Kiska, Adak, Unalaska, and Amaknak with port of Dutch Harbor. (see Figure 1) Attu, the terminus of the Aleutian Islands, is 600 miles from

Russia and 650 miles from the nearest Japanese base, therefore closer to Japan than the Alaska mainland. Most of the year the weather on Attu consists primarily of cloudy, damp fog with snow and icy rain, hardly reaching Arctic conditions but difficult for day-to-day operations. Winds can reach a velocity of more than 100 miles per hour; unfortunately, these high winds do little to clear the persistent damp fog.⁷ To further hinder operations, the island's interior consists of snow-covered mountains over 3,000 feet high while the lowlands are covered by muskeg, "a type of bog up to 3 feet deep with a hard crust on top."⁸

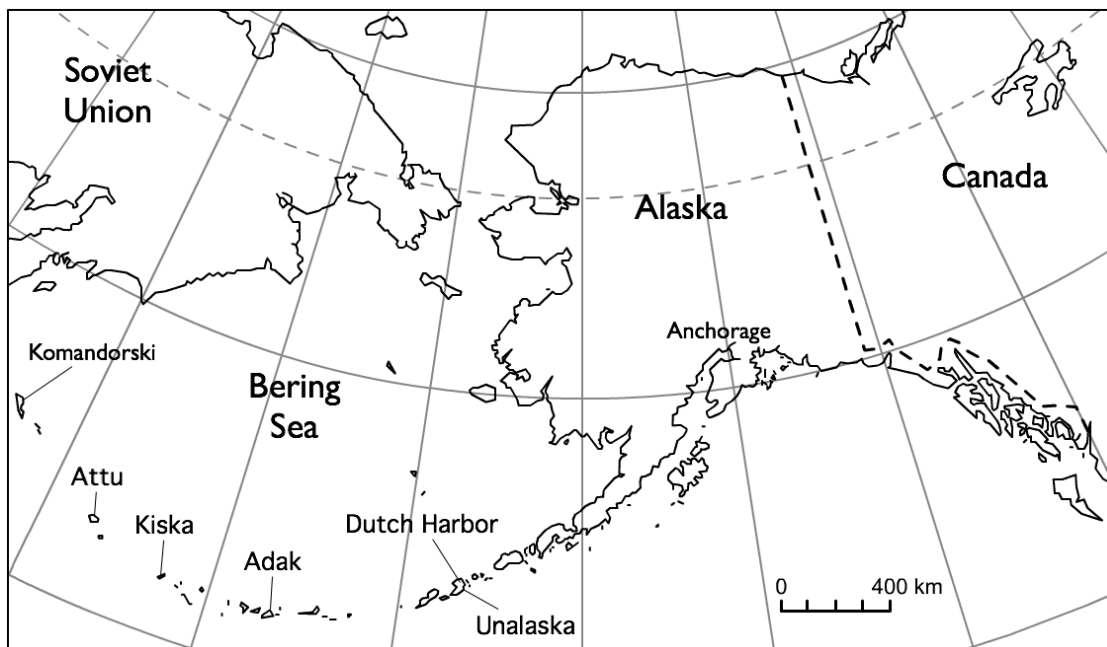


Figure 1. Alaska and the Aleutian Islands

Source: Wikimedia.org, "Aleutian Islands Map," accessed 29 April 2015, http://commons.wikimedia.org/wiki/File:Aleutian_Islands_map.png.

Previous study on the North Pacific theater of World War II and the Aleutian Campaign provide a starting point for this study. In addition, previous MMAS research conducted at CGSC provided an understanding for areas needing additional research. MAJ Richard V. Vaughn in his 1988 thesis “Cold Memories: An Examination of U.S. Army Doctrine For Combat In Cold Regions” offers a historical description of cold region conflicts and impacts on personnel, equipment, and combat operations. He then concludes with a summarization and recommendation for improved Army doctrine in this area.⁹ In 1992, MAJ Robert L. Johnson’s thesis “Aleutian Campaign, World War II: Historical Study and Current Perspective” provides an in-depth review of tactical, operational, and strategic level events in the Aleutian Campaign.¹⁰ The following year, LCDR Carol A. Wilder wrote the thesis “Weather as the decisive factor of the Aleutian Campaign, June 1942-August 1943.” This thesis provides a background on weather as a confounding factor to the amphibious landing and combat operations on Attu.¹¹

Several books and articles also provide the historical perspective. Galen Roger Perras wrote *Stepping Stones to Nowhere: The Aleutian Islands, Alaska, and American Military Strategy, 1867-1945* that provides the strategic background of Alaska and details on battles of the Aleutian Campaign. *The Thousand-Mile War: World War II in Alaska and the Aleutians* by Brian Garfield was the first book written about the Aleutians and covered all battles in the region.¹² The perspective of soldiers compiled by one of their officers, is *The Capture of Attu: As Told by the Men who Fought There* by Robert Mitchell. This compilation, published a year after the Battle of Attu in 1944, provides first hand narratives of accounts from infantry soldiers.¹³ A pamphlet prepared by George MacGarrigle titled *Aleutian Islands: The U.S. Army Campaigns of World War II* provides

a broad concept of strategic and operational environment both before and during the battle of Attu.¹⁴ The final three historical books were all published by the US Army Center of Military History as part of the United States Army in World War II: *The Western Hemisphere: Guarding the United States and Its Outposts* in 1964, *The Medical Department: Medical Service in the War Against Japan* in 1997, and *The War in the Pacific: Strategy and Command The First Two Years* in 2000.¹⁵

The topics for examination are equipment and training references. The main reference is a preventive medicine book from 1958, *Cold Injury, Ground Type*, by Dr. Tom Whayne and Dr. Michael DeBakey. Prepared for the Office of the Surgeon General, this book has a section for the Battle of Attu that discusses clothing, equipment, and footgear that was considered and field manuals available at the time of planning. Another section covers training as it impacted the cold-weather injury rates.¹⁶ As previously mentioned, *The Thousand-Mile War: World War II in Alaska and the Aleutians* by Brian Garfield provided a section on training the soldiers went through and equipment considerations for preparing operations on Attu. The papers written by the surviving officers LTC Bennett and MAJ English are historical perspectives and will be utilized for the first-hand accounts of equipment and training. LTC Bennett writing of “Two Years in the Aleutian Area: Personal Experience of a Battalion Commander” has a section discussing the effects of personnel equipment, boots, and makeshift lodgings.¹⁷ MAJ English provides an account of training and equipment in his monograph “The Operations of the 3rd Battalion, 17th Infantry (7th Infantry Division) in the Attack of a Ridge Nose, Attu Island, 21-22 May 1943.”¹⁸

What is the current relevance of this research? As globalization continues, there is an increased demand on limited natural resources, contributing to increased competition for rights to the Arctic region. The United States and other border countries to the region have started to stake claims for natural resources. Although climate change affects the summer ice flow in the region, so there is the opportunity for trade and shipping routes through the region. One of the shipping lanes into the Arctic Sea is between Alaska and Russia. The United States maintains strategic interests for future operations utilizing cold-weather equipment in this extreme environment. A couple examples of strategic challenges in the region have recently developed when Russia announced plans to deploy rotating troops along the Arctic coast, while stating no need for NATO involvement.¹⁹ After reopening Cold War era bases, Russia has also begun construction of two additional bases, closer to Alaska, staging for a possible resource race for the previously inaccessible Arctic oil and natural gas.²⁰

MAJ Bechtol, a student at the Naval War College, wrote a recommendation for a standing Joint Arctic Combat Training Center in February 2002.²¹ His paper was likely overshadowed by increasing operations in Iraq and Afghanistan. With those theaters drawing to a close and Russia posting itself for Arctic expansion, now is a time to revisit MAJ Bechtol's recommendations. This study will add further credence that the United States maintains combat effective forces for cold weather regions.

¹ Otis Hays, *Alaska's Hidden Wars: Secret Campaigns on the North Pacific Rim* (Fairbanks: University of Alaska Press, 2004), xvi, 10, 19.

² Tom Whayne and Michael DeBaKey, *Cold Injury, Ground Type* (Washington, DC: Department of the Army, 1958), 85.

³ Galen Roger Perras, *Stepping Stones to Nowhere: The Aleutian Islands, Alaska, and American Military Strategy, 1867-1945* (Vancouver, BC: UBC Press, 2003), 133.

⁴ Robert J. Mitchell, *The Capture of Attu: As Told by the Men who Fought There* (Washington, DC: The War Department, 1944), 11.

⁵ J. G. Bennett, "Two Years in the Aleutian Area: Personal Experience of a Battalion Commander" (Monograph, School of Combined Arms, 1946-1947), 9.

⁶ R. O. English, "The Operations of the 3D Battalion, 17th Infantry (7th Infantry Division) in the Attack of a Ridge Nose, Attu Island, 21-22 May 2943" (Paper, Advanced Infantry Officers Class 1949-1950), 25.

⁷ Mitchell, *The Capture of Attu*, 1, 4.

⁸ Robert Burks, "Logistics Problems on Attu," *Army Logistician* (May/June 2003): 35.

⁹ Richard V. Vaughn, "Cold Memories: An Examination of U.S. Army Doctrine For Combat In Cold Regions" (Master's Thesis, Command and General Staff College, 1988).

¹⁰ Robert L. Johnson, "Aleutian Campaign, World War II: Historical Study and Current Perspective" (Master's Thesis, Command and General Staff College, 1992).

¹¹ Carol A. Wilder, "Weather as the decisive factor of the Aleutian Campaign, June 1942-August 1943" (Master's Thesis, Command and General Staff College, 1993).

¹² Brian Garfield and Terrence Cole, *The Thousand-Mile War: World War II in Alaska and the Aleutians* (Garden City, NY: Doubleday and Company, 1969).

¹³ Mitchell, *The Capture of Attu*.

¹⁴ George MacGarrigle, *Aleutian Islands: The U.S. Army Campaigns of World War II* (Brochure, U.S. Army Center of Military History, 1992).

¹⁵ Stetson Conn, Rose C. Engelman, and Byron Fairchild, *The Western Hemisphere: Guarding the United States and Its Outposts* (Washington, DC: Department of the Army, 1964); Mary Ellen Condon-Rall and Albert E. Cowdrey, *The Medical Department: Medical Service in the War Against Japan* (Washington, DC: Department of the Army, 1997); Louis Morton, *The War in the Pacific: Strategy and Command The First Two Years* (Washington, DC: Department of the Army, 2000).

¹⁶ Whayne and DeBakey, *Cold Injury, Ground Type*.

¹⁷ Bennett, "Two Years in the Aleutian Area."

¹⁸ English, “The Operations of the 3D Battalion, 17th Infantry.”

¹⁹ Thomas Nilsen, “Russia says no need for NATO in Arctic, Expands own Military Presence,” *Barents Observer*, 22 October 2014, accessed 3 November 2014, <http://barentsobserver.com/en/security/2014/10/russia-says-no-need-nato-arctic-expands-own-military-presence-22-10>.

²⁰ Matthew Bodner and Alexey Eremenko, “Russia Starts Building Military Bases in the Arctic,” *The Moscow Times*, 8 September 2014, accessed 3 November 2014, <http://www.themoscowtimes.com/business/article/russia-starts-building-military-bases-in-the-arctic/506650.html>.

²¹ John Bechtol, “Fighting the Cold: the Need for Standing Cold Weather Combat Capabilities” (Research Paper, Naval War College, February 2002).

CHAPTER 2

BACKGROUND OF ALASKAN DEFENSE

They will come right here to Alaska. Alaska is the most central place in the world for aircraft, and that is true either of Europe, Asia, or North America. I believe in the future he who holds Alaska will rule the world, and I think it is the most important strategic place in the world.

— General William “Billy” Mitchell, *Stepping Stones to Nowhere: The Aleutian Islands, Alaska, and American Military Strategy*

This study of the U.S. Army experience in Alaska and the Aleutians will begin with Alaska defensive military basing decisions prior to the Japanese invasion of Attu in the North Pacific. A brief history of Alaskan defenses prior to 1900 and the outline of defense plans from 1900 through 1942 will establish the background of U.S. strategic thought for this part of the world. Another topic will be an overview of previous cold weather experience of the US military from World War I during the “Polar Bear” Expedition fighting the Bolsheviks in Russia from 1918-1919. With many ominous events in the Pacific theater as Japan initiated hostilities against the United States with the bombing of Pearl Harbor in 1941, this chapter will conclude with the Japanese attacking the Aleutians in 1942. This chapter will follow a chronological timeline starting in the Pacific, shifting to Europe for cold weather combat in Russia, and finally concluding in the Pacific.

The relevance of Alaska as a strategic location was first realized in 1904, but prior to this there had been little interest in the Aleutian Islands by either the Army or the Navy. In 1853, the Navy conducted a survey of the Aleutian chain only to find disappointingly suitable harbors and no coal deposits, further contributing to little Aleutian interest. In the years after the 1867 Alaskan purchase, the Army had a sordid

reputation with widespread illegal trade of alcohol and guns, bootlegging, and supporting prostitution; ultimately leading to budget cuts and the Army's temporary territorial withdrawal in 1877. Upon discovery of gold in the Yukon, the Army returned in 1897 to restore civil control and calm potential violence over gold conflicts with establishment of more than a dozen posts by 1900. The outbreak of Russo-Japanese War in 1904 with Japan's victory in 1905 demonstrated the emerging and improving Imperial Japanese Navy (IJN) with potential future threat against United States Pacific interests. In March 1904, the navy declared Kiska Island as a naval reservation for its vital retention in major war plans against Japan.¹

From 1904 until 1914, there was little improvement in Alaskan defenses against Japan. Despite ill treatment of Japanese immigrants along the US Pacific coast, many in Congress and senior military leaders believed Japan was too busy with recent gains in Korea and Manchuria after the Russo-Japanese War (1904-05) to confront the United States. Congress refused to appropriate additional funds for the newly established naval reservation at Kiska; consequently the navy used pre-existing funds to build a wharf and coaling station. Naval War College planners were primarily focused on Philippines, Hawaii, and Guam as poorly defended, tempting targets for Japanese aggression; while also serving as strategically important counterattack basing locations. While at the same time, a divisive navy strategist, Admiral Alfred Thayer Mahan, strongly advocated basing nearly all United States Navy fleet at Kiska as it is only 1,800 and 2,700 miles from Japan and Guam, respectively. Ultimately, the Navy selected Pearl Harbor in Hawaii as its primary Pacific port, but the outbreak of total war in Europe shifted strategic attention away from the Pacific.²

Immediately following World War I, the United States, along with France and Great Britain, learned some valuable cold weather lessons from 1918-1919 in Siberia near the northern Russian ports of Murmansk and Archangel along the Arctic Ocean.³ The small allied forces had the purpose of securing warehouses used to store unemployed war material, including 110,000 rifles, while supporting anti-Bolshevik forces and halting further regional involvement of Japanese forces. The soldiers quickly found their cold-weather clothing used in France to be insufficient for Russian winter and they had little training on how the weather would affect their equipment. The Army issued Shackleton boots, made of canvas and leather, that were found to be warm and functional for ski or sedentary defense, but slippery on ice or packed snow for offensive operations.⁴ During the day, sunlight would melt snow and soak the canvas on the Shackleton boot which contributed to more frostbite than during the coldest days of winter for the Allies, demonstrating another drawback of the boots.⁵ Americans resorted to trading their own footgear with local inhabitants or utilizing the boots from dead Bolsheviks.⁶

The deep snow proved to be difficult for any Allied offensive operations unfamiliar to the terrain and weather. However, Bolshevik forces with their knowledge of the region effectively utilized skis, sleds, and snowshoes to mount a winter campaign in January 1919, forcing the Allies to retreat. Another noted equipment complication noticed by soldiers was that machinegun oil froze at 50 degrees below zero. In the spring of 1919, the American force was ordered to evacuate with extraction starting in June 1919. The British remained until the fall of 1919. The region succumbed to Bolshevik rule in February 1920.⁷

After World War I, the five nation-state victors (United States, Britain, Japan, France, and Italy) signed the 1922 Washington Naval Treaty to constrain a naval arms race with a 10-year limitation on naval construction, warship tonnage, new bases, and improvements to existing Pacific facilities. While Article XIX of the treaty established exceptions for basing sites of coastal islands around Alaska, and United States' Pacific coast, and Panama Canal, the Aleutian Islands and Hawaii were not exempted.⁸ Many Americans applauded the treaty, but senior naval leaders felt it stifled strategic protection of Pacific interests and therefore threatened national security. However, around the same time, British Embassy in Japan reported increasing anti-American hostilities within the IJN with mounting attention among Japan's general staff to an inevitable war with the United States.⁹

While the United States Navy continued focusing on central Pacific as the defensive area for future conflict with Japan, BG William "Billy" Mitchell, Assistant Chief of the U.S. Army Air Service in 1919, increasingly advocated for a "triangular defensive flyway system anchored on Alaska, the Panama Canal, and Canada."¹⁰ BG Mitchell strongly promoted increasing the army air services as the primary national defense with responsibility extending 200 miles out to sea. However, as a result of his boisterous, confrontational habits, his superiors reassigned him to Hawaii in 1924, and upon returning, he wrote a prophetic report detailing the strengths of Japanese air power. In this report, BG Mitchell detailed conjectural air attacks on the islands of Hawaii, Alaska's Aleutians, and Philippines.¹¹ From the Aleutians, BG Mitchell speculated Japan would first take Alaska, then attack south along Canada's west coast to the United States. In 1924, the Army Air Service conducted a successful test flight of the "air-route from

the US to Japan via the Aleutians and Kurile Islands”; however, the suitability of military forces in the Aleutians was deemed doubtful due to poor weather and mechanical problems in the North Pacific. In 1925, BG Mitchell further asserted that 300 aircraft should be based in Alaska with some being based on Attu. Unfortunately in 1926, after years of questioning conventional naval and army culture, a court martial panel convicted BG Mitchell of insubordination for critical statements of his superiors and overt inflation of operational air power; he subsequently resigned his commission.¹² Many of BG Mitchell’s claims for air defense and operational power were not supported by the current technology, and only later, with technological advancement, did his claims become realistic.

When planning began for a future conflict with Japan, labeled “Orange” in a series of notional war plans developed under the guidance of the Joint Board, little was mentioned about Alaska due to poor weather, hazardous sea lines of communication, and theorized improbable assault by the Japanese. In the 1928 Orange plan, Alaska was labeled a possession with limited military usefulness and identified Kiska and Unalaska in the Aleutians as the only tentative potential location for naval base sites. When Herbert Hoover won the presidential election of 1928, a shift in strategic focus occurred. President Hoover, suspicious of military advisors and new weapons, held the conviction that economic growth was key to international relations, so he sought arms control agreements and dismissed defensive concerns of islands near North America. However in June 1933, increased necessity for defensive forces in the Aleutians occurred after a Japanese ship visited Attu on three separate occasions, raising anxieties by Alaska Governor John Troy for potential attack along the shortest route from eastern Asia.¹³

Possibly related to the outcome of the unauthorized Japanese visit, the War Plans Division (WPD) in 1934 began to postulate the threat of Japanese capturing Siberia near Alaska, and subsequently updated Plan Orange to include “a single infantry battalion and a few artillery pieces – but only once war had broken out.” The same year, Alaskan Representative Anthony Dimond introduced a bill to establish a \$16 million military facility in Fairbanks (including 100 aircraft), citing the severe threat Japan posed to Alaska, and numerous Alaskan harbors Japan could employ, if seized, to attack the United States. Unfortunately, since this was the height of the Great Depression, President Roosevelt cut the military’s 1934 appropriation by \$144 million, concentrating on social and employment programs, leaving the military at its lowest budget since prior to World War I.¹⁴

Driven by the need for resources in the 1930s, the Japanese military became more dominant in politics, objecting to international influence, and threatened United States regional interests leading many to conclude war was unavoidable.¹⁵ While relations deteriorated between United States and Japan after the Manchuria invasion in 1931, the Japanese Pacific threat became even more dangerous and tangible in December 1934 when they announced intentions to abandon the Washington Treaty after 31 December 1936. In order to deter aggression, the invigorated State Department and war planners sought to reinforce pacific possessions by preserving the Hawaii, Alaska, and Panama Canal strategic triangle at the cost of \$360 million. BG (retired) Mitchell was summoned by Alaska Representative Dimond to testify before Congress on the importance Alaska air defense. Unfortunately Congress was reluctant to fund projects in the Pacific despite Mitchell’s testimony and State Department guidance.¹⁶

When the new director of WPD, Brigadier General Stanley Embick, took over in October 1935, he perceived the “continental United States as a citadel and its overseas possessions as outposts of the main fortress,” as such he promoted the increased defense of Hawaii, Alaska, and Panama Canal strategic triangle.¹⁷ As Orange plans continued to develop, the unfounded notion held between Army and Navy that Alaska was not of strategic interest, yet the WPD in 1937 admitted never fully studying Alaska’s military prospects. With the end of the Washington Treaty, the Army initiated a 10-year Alaskan mapping project for navigation of Alaskan air operations. Naval planners recommended building air facilities at Dutch Harbor, Kodiak, and Sitka; stationing a few surface ships in Alaska waters; building airboat facilities at Sitka and Kodiak; creating a fuel dump on Unalaska; and assigning a summer airboat squadron and tender. Unfortunately, the United States Naval commander-in-chief only authorized a patrol base for Kodiak fearing Alaskan basing as overtly confrontational towards Japan. President Roosevelt, seeking diplomatic alternatives, proposed neutralizing the Pacific; however in July 1937, the Sino-Japanese war ended diplomatic options of Pacific neutrality.¹⁸

Within Plan Orange in February 1938, the Army and Navy agreed to defend Alaskan territory but only once war started. Colonel Sherman Mills questioned the logistics capability to respond quickly with transporting the Fourth Army from San Francisco to Dutch Harbor, so he advocated for prompt stationing of a garrison on Kodiak and Unalaska, both minor and unfinished navy installations. Rejecting Mills’ recommendations, the WPD selected Anchorage for a permanent garrison due to better air support, proximity to developed areas of Alaska, and less expensive to support and maintain.¹⁹ Serendipitously, in December 1938, Congress appropriated \$19 million for

the Navy to build and improve bases in Alaska and the Aleutians. The Navy used the allocated funds to enlarge the seaplane base at Sitka and establish seaplane and submarine bases and Kodiak and Dutch Harbor.²⁰

The strategic environment continued to develop as the Joint Army Navy Planning Committee (JANPC) classified Germany as the major threat, followed by Italy, then Japan in early 1939 only to be bolstered by Germany's massive invasion of Poland on 1 September 1939. The Joint Board instructed JANPC to begin development of a new set of plans known as Rainbow Plans for possible two-theater war in Atlantic and Pacific with defenses as far west as Unalaska in the Aleutians; the plan still considered Japanese hostilities against Alaska highly implausible.²¹ With the war outbreak in Europe, the War Department slowly accelerated planning and build-up of Alaskan defense from 1939-1941 with five objectives: "to augment the Alaska garrison; to establish a major base of operations near Anchorage; to develop a network of air bases and operating fields within Alaska; to garrison the airfields with combat forces; and to provide troops to protect the naval installations at Sitka, Kodiak and Dutch Harbor."²² In July 1940, Brigadier General Simon Bolivar Buckner, Jr. was assigned as the new Alaskan commander and desired to establish and undertake aggressive air warfare onto Japan mainland via the shortest route.²³ General Buckner strongly endorsed constructing airstrips in western Alaska for two strategic purposes: "First, he gave greater emphasis to the threat which air power posed to the security of the territory. . . . Second, he thought in terms of an aggressive concept of defense under which Alaska would be used as a base for the projection of American military power into the western Pacific."²⁴

In 1939, planning agencies decided to base a cold weather experimental station and long-range defense in Fairbanks, breaking ground on Ladd Field in August 1939, while the major tactical air base and principal army headquarters was established at Fort Richardson, Alaska in June 1940. The Army was directed to defend Navy bases along the Aleutians in August 1940. However, ongoing disagreements between the services delayed finding suitable basing locations until breaking ground in January 1941 on Charcoal Island near Sitka and in February 1941 for Fort Greely on Kodiak Island.²⁵

In 1940, the Navy began construction at Dutch Harbor for a combined air and submarine station while the Army started construction of nearby Fort Mears in January 1941. While the planned transport of troops to the new bases was pending housing construction, increased American-Japanese tensions in early 1941 caused the War Department to move-up deployment of troops. In June 1941, mounting intelligence reports regarded as plausible a Japanese attack of Alaska in response to German-Soviet Union conflict so that the War Department authorized emergency garrisons by the end of July at Sitka, Kodiak, and Dutch Harbor. As Japanese-American relations deteriorated and imminent prospect of war, in November 1941 all agencies for Alaska defense stepped up request for air reinforcements as this was considered the most serious weakness of Alaska defense.²⁶

On 7 December 1941, the IJN launched a hostile expansion in the Pacific against the Allies by first attacking the United States at Pearl Harbor, and continued a phenomenal conquest against Allied bases and colonies over the next six months of war. In December 1941 Japan conquered, Guam, Indochina, Thailand, Wake, and Hong Kong; by the end of January 1942 Japan occupied Manila, Singapore, and Malaya. In March

1942, British and Dutch forces were disintegrated as the IJN forced the British fleet from the Indian and Pacific Oceans. And finally in May 1942, the United States controlled Philippines succumbed to Japanese occupation.²⁷ In the relatively short time of six months, the Japanese military managed to conquer the Southwest Pacific area around Indonesia north of Australia and Central Pacific west of Midway Atoll. (see figure 2)



Figure 2. Japanese Limit of Advance, 1942

Source: George MacGarrigle, *Aleutian Islands: The U.S. Army Campaigns of World War II* (Brochure, U.S. Army Center of Military History, 1992), accessed 7 February 2015, <http://www.history.army.mil/brochures/72-8/map1.JPG>.

The first major response to the Japanese hostilities was the Doolittle Raid, the Pearl Harbor counter-strike by the United States against mainland Japan. Unknown to Japan at that time, the raid was launched from carriers in the Central Pacific; however, the Japanese Imperial Staff theorized the raid could have originated in the Western Aleutians, so on 5 May 1942, they recommended flank defense in the north Pacific with a formal plan authorization for “invasion and occupation of the western Aleutians.”²⁸

While another possible effect for the Aleutian attack was a diversion to draw the American fleet away from Pearl Harbor for the subsequent strategic Japanese attack at Midway Atoll.²⁹ The attacking Japanese force consisted of two small carriers, two heavy cruisers, three destroyers, and 2,400 troops with the purpose occupying the Western Aleutians in order to deny Americans a sea and air offense in the North Pacific and obstruct collaboration with Soviet Union.³⁰ On 3 June 1942, the Japanese offense in the Aleutians commenced with an air raid on Dutch Harbor. Facing little opposition, the Japanese launched a second air raid on 4 June.³¹ On 6 June 1942, the IJN’s Third Special Landing Force with 500 troops captured Kiska, and then on 7 June, 1,100 troops seized Attu.³² With the Japanese defeat at Midway, they no longer had the option of patrolling from the Hawaiian chain to the Aleutian Islands, but could block Americans from using the North Pacific as a bombing route against Japan.³³

To summarize this chapter, although several vocal campaigners sought to establish strong defensive bases in Alaska, little development actually occurred prior to Japan’s abandonment of the Washington Treaty in 1936. Yet most base construction actually occurred from 1939-1941 only after war started in Europe. With the Army presence in Alaska for over seventy-five years and previous cold weather operations in

Russia, there should have been lessons learned as the Army prepared a response force to retake Attu.

¹ Perras, *Stepping Stones to Nowhere*, 7-9.

² Ibid., 9-11.

³ Alexander Barnes and Cassandra Rhodes, "The Polar Bear Expedition: The U.S. Intervention in Northern Russia, 1918-1919," *Army Sustainment* 44 (March/April 2012): 52.

⁴ Allen F Chew, Leavenworth Papers No. 5, *Fighting the Russians in Winter: Three Case Studies* (Fort Leavenworth, KS: Combat Studies Institute, December 1981), 5.

⁵ Ibid., 9.

⁶ Barnes and Rhodes, "The Polar Bear Expedition," 52-54, 57.

⁷ Ibid., 55-57.

⁸ The Public's Library and Digital Archive, "Conference on the Limitation of Armament, Washington, November 12, 1921-February 6, 1922," accessed 5 January 2015, http://www.ibiblio.org/pha/pre-war/1922/nav_lim.html.

⁹ Perras, *Stepping Stones to Nowhere*, 13.

¹⁰ Ibid., 14.

¹¹ C. V. Glines, "William 'Billy' Mitchell: An Air Power Visionary," accessed 5 January 2015, <http://www.historynet.com/william-billy-mitchell-an-air-power-visionary.htm>.

¹² Perras, *Stepping Stones to Nowhere*, 15-18.

¹³ Ibid., 19-20.

¹⁴ Ibid., 21-23.

¹⁵ John Benson and Takao Matsumura, *Japan 1868-1945: From Isolation to Occupation*. (New York, NY: Routledge, 2014), 245.

¹⁶ Perras, *Stepping Stones to Nowhere*, 28-30.

¹⁷ Ronald Schaffer, "General Stanley D. Embick: Military Dissenter," *Military Affairs* 37 (October 1973): 90-91.

- ¹⁸ Perras, *Stepping Stones to Nowhere*, 33-35.
- ¹⁹ Ibid., 41.
- ²⁰ Conn, Engelman, and Fairchild, *The Western Hemisphere*, 224.
- ²¹ Perras, *Stepping Stones to Nowhere*, 43.
- ²² Conn, Engelman, and Fairchild, *The Western Hemisphere*, 224.
- ²³ Perras, *Stepping Stones to Nowhere*, 46.
- ²⁴ Conn, Engelman, and Fairchild, *The Western Hemisphere*, 240.
- ²⁵ Ibid., 229-230, 234-235. The current missile defense base of Fort Greely near Delta Junction, Alaska should not be confused with Fort Greely on Kodiak Island.
- ²⁶ Ibid., 236-237, 250-251.
- ²⁷ Garfield and Cole, *The Thousand-Mile War*, 5.
- ²⁸ Ibid., 6-7.
- ²⁹ Ibid., 7.
- ³⁰ Conn, Engelman, and Fairchild, *The Western Hemisphere*, 259.
- ³¹ Perras, *Stepping Stones to Nowhere*, 80.
- ³² Ibid., 82.
- ³³ Conn, Engelman, and Fairchild, *The Western Hemisphere*, 263.

CHAPTER 3

TRAINING AND EQUIPING TO RETAKE ATTU

Seldom has an operation been planned with less knowledge of the conditions the troops would have to face.

—Stetson Conn, *The Western Hemisphere: Guarding the United States and Its Outposts*

Indeed, the training was directed almost wholly toward the landing and little toward the problems that would be faced once ashore.

—Mary Ellen Condon-Rall, *The Medical Department: Medical Service in the War Against Japan*

This chapter will focus on answering the thesis questions regarding training and equipping of the 7th ID from Fort Ord, California. It will start with Aleutian and Alaska defenses directly prior to Japan forces seized Attu on 6-7 June 1942 and War Department plans for a counter-offensive. The primary focus will then shift to answering the question of training the 7th ID conducted for the counter-offensive with an overview of amphibious, Arctic, and cold-weather training manuals available at that time. With unfamiliar topography and limited knowledge of enemy situation related to foggy weather impeding surveillance, the 7th ID focused heavily on amphibious operation training. Then the question regarding equipping the 7th ID for the Aleutian campaign will be explored, as the 7th ID was previously equipped for engagement in Africa. Yet despite recommendations based on over 50 years of Alaskan Army knowledge, the 7th ID was issued equipment that was in contradiction to previous cold weather experience.

Fortunately, the United States was not caught unaware of Japan's plans to attack the Aleutian Islands or mainland Alaska. In April and May of 1942, the United States intercepted Japanese messages requesting information and charts in the North Pacific

with the anticipated end state to “prevent the United States from using the northern approach to Japan and to obstruct communication between the United States and the Soviet Union.”¹ Both the Army and Navy prepared a defensive posture with the Navy forming Task Force 8 off Kodiak comprised of five cruisers, fourteen destroyers, six submarines, and auxiliaries. The Army reinforced Alaskan air defenses resulting in 10 heavy bombers, 34 medium bombers, and 95 fighters with about 45,000 officers and enlisted men, including about 13,000 stationed at the Aleutian bases.²

After the Japanese seized Attu and Kiska on 6-7 June 1942, the Army expanded airfields along the Aleutian chain so that they could increase bombing operations against the Japanese when weather permitted. By December 1942, the recommendation for selection and training of a ground assault force was submitted to Chief of Staff, General George Marshall, Jr. to drive the Japanese from their foothold on the Aleutian Islands. The War Department selected the 7th ID based on state of readiness while also being stationed near Fort Ord, where they would conduct amphibious operations training.³ The War Department timetable called for a spring 1943 invasion while ultimately setting D-day at May 7, limiting time available for preparing the 7th ID.⁴ Although, there was no way to conduct cold weather training at Fort Ord.

However, prior to this change in mission, the 7th ID had been training in the Mojave Desert for operations in North Africa while also being equipped for the contrasting environmental conditions. Surviving veteran Dean E. Galles describes the change in mission:

And then we were, in 1942, we were, we went to the desert, Mohave Desert in California, and we trained there on mainly the, what the, our infantry units had was what they called a halftrack, which was halftrack, and they had two wheels to

steer in the front and stuff, and they were armored and all that. And we trained with them for quite a while, and our orders were we were, or the rumors were we were being prepared for North Africa to help General Patton. And after he did such a miraculous job in the, Africa became quieter, why they brought us in off of the desert training at, I think it was about February of 1943, or maybe it was January of '43, someplace in there, and we went back to Fort Ord in our regular garrison places. And then in March, we had orders to proceed to San Francisco, and we didn't know what we was going to do.⁵

Another unfortunate reality, Army G4 at San Francisco had been focusing on Pacific logistics for the tropical gear needed in locations like Guadalcanal. The Army's cold weather gear had all been sent to England and Africa for the forthcoming Italian campaign, and with only three months for training, the 7th ID had little time to requisition additional equipment.⁶

The Marine Corps experimented on advanced amphibious warfare during the 1920s and 1930s for future conflict with Japan. Their doctrine was published in 1941 as Field Manual 31-5.⁷ The Army had little experience with amphibious operations, so the commanders of the 7th ID sought training from Marines near Monterey, California for training based on experiences during Guadalcanal and North Africa Campaigns.⁸ The training programs and schedules were not included in FM 31-5 so that planners based preparations on beachhead terrain, enemy, and mission.⁹ The 7th ID rigorous amphibious training course focused on “wet and dry net practice, boat landings on Monterey Beach, training cruises, and landings elsewhere along the coast.”¹⁰ Table 1 provides a sequence of training followed by Table 2 that provides focused categories and recommended training drills for Army ground forces prior to embarkation, both adapted from FM 31-5, Chapter 11 “Special Training for Landing Operations.”¹¹

Table 1. Sequence of Training for Amphibious Operations
<ol style="list-style-type: none"> 1. Start with training soldiers and leaders of small units, then progress through successive echelons 2. Nets are hung from second story barracks window to simulate climbing down the side of a ship 3. Diagrams of soldier placement in small boats 4. Assault of machine-gun nests and similar beach defenses like barbed wire entangle in water and shore 5. Sand tables, relief maps, ordinary maps, and air photographs for war gaming landing attack 6. Joint Force training to develop coordination of Army and Navy personnel 7. Culminate with Joint exercises with embarking on ships, debark personnel and equipment into landing boats and make actual landings

Source: George Marshall, FM 31-5, *Landing Operations on Hostile Shores* (Washington, DC: War Department, 1941), 172-173.

Table 2. Training Categories and Drills for Amphibious Operations	
Categories:	Training Drills:
Embarkation Exercises	<ul style="list-style-type: none"> - Loading personnel, equipment, and supplies on ships for speed, economy of space, and accessibility - Exercises show areas to improve or adjust embarkation plans to secure maximum efficiency in loading
Debarkation	<ul style="list-style-type: none"> - Drilled in assembling by boatloads in assigned spaces, movement by designated route to gangway, both with and without blackout conditions - Practice ship ladders or cargo nets while carrying arms and equipment while debarking - Ensure Navy and Army personnel are familiar with each other's equipment
Movement from Ship to Shore	<ul style="list-style-type: none"> - Exercises to move from ship to shore in least vulnerable formation and arrive at desired point for combat action - Gas and antiaircraft defense in small boats
Firing from Small Boats	<ul style="list-style-type: none"> - Army personnel to assist Navy gunners trained in firing from moving boats; includes antiaircraft and shore targets
Landing on Beach	<ul style="list-style-type: none"> - Landing during daylight and darkness, in varying depths of water and surf conditions - First by single boatloads, then by boat division loads, and lastly by complete landing groups
Advance from Beach	<ul style="list-style-type: none"> - Coordination of ship gunfire - Conduct of supporting fire from boat guns - Close support by aviation - The operation of the signal communication, supply, and evacuation systems - Coordination of beach and shore party activities - Functioning of naval and field artillery liaison parties - Handling of weapons and ammunition

Source: George Marshall, FM 31-5, *Landing Operations on Hostile Shores* (Washington, DC: War Department, 1941), 173-175.

Next, an overview of the *Arctic Manual* (TM 1-240) and *Operation in Snow and Extreme Cold* (FM 31-15), manuals that were available to Army units for understanding

terrain, conditions, and equipping for operations in Arctic and cold weather. The *Arctic Manual* was first released in 1940, revised in 1942, then subsequent revisions after the Aleutian Campaign, so this study will focus on the version existing during the 7th ID planning. The *Arctic Manual* was broken into two volumes, totaling 536 pages, quantitatively comprehensive with chapters to include the following topics: Geography; Food and Drink; Clothing and Personal Equipment; Health, Accident, and Disease; Travel; and Transportation. In the *Arctic Manual*, the training for self-aid included detailed instruction for treatment of frostbite, treatment of snow blindness, thawing of hands and feet, and medical care in emergencies.¹² *Operation in Snow and Extreme Cold* was released in 1941, less detailed than the previous manual at only 82 pages, but with relevant information for planning in these conditions. Important for the 7th ID would have been the following chapters: Food, Clothing, and Shelter; Transportation; Combat; Care of Weapons and Equipment; Supply and Evacuation; and Sanitation and First Aid. In the introduction of this manual, the two key considerations for cold weather operations were primarily clothing and equipping troops accordingly and thorough training of personnel in regards to self-aid and weapons functions.¹³ Later, the manual provides a brief overview of the importance of training for sanitation, first aid, and treatment of frostbite, hypothermia, and snow blindness.¹⁴

In 1943, the Army had functioned in Alaska for nearly 75 years and largely adopted the clothing worn by Eskimos, primarily made of furs.¹⁵ The *Arctic Manual* contains an entire Chapter on Arctic clothing, discussing the Eskimo style of clothing, purpose of different animal hides, and preparation and maintenance of animal skin garments.¹⁶ There was only one reference of commercial boots for rough work around

mines or digging ditches.¹⁷ Alaska units had only encountered two significant cases of frostbite, both attributed to severe weather and improper command precaution; otherwise Alaskan soldiers had superior equipment and training in cold injury prevention techniques.¹⁸ Adapted from the *Arctic Manual*, Table 3 outlines the likely cold-weather injuries and corresponding treatment and prevention that the 7th ID would encounter.

Table 3. Cold Weather Injury Treatment and Prevention		
Injury	Treatment	Prevention
Frostbite	<ul style="list-style-type: none"> - Gradual thawing is key - Don't rub with snow - Don't warm with friction <p><u>Face:</u></p> <ul style="list-style-type: none"> - Thaw with your own hand or someone else <p><u>Wrist/Hands:</u></p> <ul style="list-style-type: none"> - Hold wrist against face or slip inside clothes against naked skin <p><u>Feet:</u></p> <ul style="list-style-type: none"> - Wrap a skin around to warm - Put your foot between companions coat and abdomen 	<ul style="list-style-type: none"> - Proper clothing is key - Return to camp if available <p><u>Face:</u></p> <ul style="list-style-type: none"> - Be clean shaven, beards collect moisture and freeze - Don't use Vaseline on face <p><u>Wrist/Hands:</u></p> <ul style="list-style-type: none"> - Coat and mitten must overlap or at least meet <p><u>Feet:</u></p> <ul style="list-style-type: none"> - Most difficult - Change footgear if available
Snow Blindness	<ul style="list-style-type: none"> - Shield the eyes from light - Remain in a darkened place - Bandages over eyes - Morphine drops or boracic solution 	<ul style="list-style-type: none"> - Consistent use of amber glasses - Blackening the nose - Rest eyes by using alternatively - Eskimo goggles

Source: G. E. Stratemyer, *Arctic Manual* (Washington, DC: Department of the Army, 1940), 292-302.

When Alaskan equipment experts were sought to guide planning at a San Diego Conference in April 1943, relations were strained when disruptive arguments erupted over climate and terrain impacting the operation on Attu, now code-named Jackboot in Operation Sandcrab. General John DeWitt, Western Defense Commander, was confident that Attu could be seized in three days; however, General Albert Brown, Commander of 7th ID, suspected that the interior island terrain alone would take a week for his troops to navigate. Regrettably, most Alaskan advisors were then viewed with reservation and suspicion; only one Alaskan advisor was trusted by 7th ID leadership but he had never been west of Kodiak, a drier climate and firmer ground than Aleutians. Unfortunately, his misleading recommendations were regarding personnel clothing, boots, and equipment.¹⁹ Additionally, no American agency had ever mapped the interior terrain of Attu, only the shoreline, thereby complicating the terrain discussion during planning.²⁰

In regards to personnel equipment, preparing a division's worth of personnel clothing from animal skin would have been unfeasible in three months. *Operation in Snow and Extreme Cold* discusses alternatives to animal garments, importance of layering, and allowing for escape of moisture away from the body. For the terrain in the Aleutians, this manual recommends the shoepacs as the best footgear obtainable for mud, slush, and wet snow. In addition, the manual discusses the importance of clothing and service shoe maintenance in order to repair holes and cracks that can allow cold and moisture to reach the body. For sleeping bags, the manual recommends a down-filled bag that must be thoroughly dried at least every three days.²¹ Table 4 provides an overview of cold-weather considerations for weapons and mechanical equipment based on the *Operation in Snow and Extreme Cold* manual.

Table 4. Weapon and Equipment Recommendations	
Category:	Arctic Considerations:
Weapons	<ul style="list-style-type: none"> - Oil or grease thickens on weapon mechanism preventing proper functioning, unless special cold-weather oil is used - Powdered graphite used in bearing surfaces will cause them to work smoothly and reduce wear - Snow in muzzles can cause the occasional burst barrel when fired - Care must be taken to insure bore is free of snow or ice, but closing the muzzle with any plug is prohibited - Cold metal sweats when brought into heated areas so weapons and ammunition should be left outside - Weapons stacked with mechanism protected from snow - Gasoline can be used in lieu of water for cleaning barrels
Equipment	<ul style="list-style-type: none"> - Lenses and prisms of optical equipment can fog when brought indoors or close to the face so special eyepieces should be utilized - Batteries can become less efficient: small flashlights can be carried inner layer pockets, vehicle batteries can be brought indoors to warm - Hand generators and other mechanically operated devices are effected by congealed oil so keep in heated tents or vehicles

Source: George Marshall, FM 31-15, *Operations in Snow and Extreme Cold* (Washington, DC: Department of the Army, 1941), 43-45.

When the invasion of Attu was being planned, Office of Quartermaster General sent specialists to the Alaska Defense Command in order to observe environmental conditions and advise on footgear and clothing.²² Table 5 shows a comparison of “recommended-versus-issued” for various personnel equipment items with a short description of rationale for the decision. In some cases like the shoepac, the recommended

item was not available and could not be manufactured within the requisition time so soldiers were issued what was available.²³

Table 5. Office of the Quartermaster Considerations for Attu Invasion		
Equipment	Recommended (R) / Issued (I)	Reviews
Trousers	Kersey-lined trousers (R)	- Increased protection from cold, wet conditions
	Olive-drab woolen trousers (I)	- Waterproofed - Not durable past a few days
Jacket	Reversible ski parka (R)	- Hood - More protection from wind and rain
	Arctic field jacket (I)	- No hood - Less protection from wind and rain
Sweater	Recommended	- Necessity in extreme cold based on Alaska experience
	Not issued	- Not authorized by 7th ID
Sleeping bag	Inner lining of Arctic sleeping bag or mountain bag with water-repellent case (R)	- Small enough to be carried into combat
	Arctic sleeping system (I)	- Too bulky
Footgear	Shoepacs (R)	- Relatively waterproof, rubber sole, kept feet warm - Not available
	“Blucher” style boot (I)	- Not waterproof - Did not keep feet warm - Soles wore out in 4-6 weeks - Tight fit impaired circulation to feet - Friction point at Achilles tendon

Source: Tom Whayne and Michael DeBakey, *Cold Injury, Ground Type* (Washington, DC: Department of the Army, 1958), 89-91.

Due to the clandestine operation for the 7th ID, the soldiers remained unaware of their true destination even when departing San Francisco; only primary division officers knew they were headed to the Aleutians. Soldiers were issued summer fatigues and received lectures on tropical diseases. Meanwhile, sealed crates of clothing and equipment were loaded on the ships, only to be opened at sea. There was standing-room only available on the transport ships with men sleeping in shifts. Even upon arriving in Cold Bay after weeks at sea, the men were not able to either exercise or break in the newly issued service boots prior to start of operations.²⁴ The deployment events as articulated by 7th ID veteran William Argyl Anderson:

In early April we boarded the ship in San Francisco and set sail past Alcatraz Prison and into the Pacific, not knowing where we was headed for. There was rumors we were heading for Hawaii as a jumping off place for the battles in the South Pacific, but after wandering around in the ocean for days on days we ended up at Kodiak Island, Alaska. Then it was on to Dutch Harbor. We went ashore and it was like a Wild West town of the 1800's.²⁵

Another 7th ID veteran recounts getting additional equipment that provided a measure of foresight into the impending operation, Dean E. Galles states, "When we got to San Francisco, we entered a big warehouse there, and we just stripped down and turned in all our suntans, and they issued us long underwear and wool pants and some kind of semi-jackets. And still, we didn't know what our mission was or going to be."²⁶

A historical account of additional training occurred in the 7th ID's Provision Scout Battalion lead by Captain William H. Willoughby. Captain Willoughby was given authority to pick the best division soldiers for their special skills and physical condition, determined by a four-mile "ruck march" on mountainous terrain within an hour with full combat load. Captain Willoughby's unit trained "vigorously" while in California, then, upon arriving in Dutch Harbor prior to operations, trained in snow and muskeg while

lecturing soldiers on dangers of trench foot and frostbite. He deceptively refitted his men at the local supply depot in Dutch Harbor with “jackets, socks, and carefully chosen boots.”²⁷

Other than the Provisional Scout Battalion, historical accounts of training for the counter-offensive on Attu focused solely on the amphibious landing. Unfortunately, the 7th ID trained on different terrain, Monterey beaches versus Attu muskeg, and was unprepared for the divergent climate conditions to be encountered. While the *Arctic Manual* and *Operation in Snow and Extreme Cold* represent important training and environmental considerations available at the time, this study has been unable to ascertain whether the 7th ID utilized these manuals. The Battle of Attu cold-weather injury rates, which will be discussed in the next chapter, support the supposition that Arctic training and cold-weather equipment preparation were essentially absent. The leadership of the 7th ID accepted the cold-weather injury risk in order to maintain the clandestine preparation while planning for a three-day operation.²⁸ Perhaps the competing leadership interests between General DeWitt, General Brown, and Admiral Nimitz played a fundamental factor. The probable reality was simply that little was known of Attu’s terrain and weather to considerably impact planning. And the Army culture prevented anyone from calling “Time Out” until fully prepared.

The training resources available and utilized while the 7th ID prepared for the counterattack on Attu were marginal at best. The 7th ID shifted from North Africa operational planning to the North Pacific with only three months for training and equipping. Despite 75 years of Arctic experience, equipping, and training, the recommendations provided by Alaskan experts and Army manuals appear to have been

disregarded. In the next chapter, the subsequent impact of the 7th ID's training and equipping on the Battle of Attu will be explored.

¹ Conn, Engelman, and Fairchild, *The Western Hemisphere*, 259.

² Ibid., 260-261.

³ Ibid., 275-277.

⁴ Garfield and Cole, *The Thousand-Mile War*, 196.

⁵ Veterans History Project, "Dean E. Galles Interview by Christin Siefert," accessed 7 February 2015, <http://lcweb2.loc.gov/diglib/vhp/story/loc.natlib.afc2001001.76663/>.

⁶ Garfield and Cole, *The Thousand-Mile War*, 194, 198.

⁷ Mary Ellen Condon-Rall and Albert E. Cowdrey, *The Medical Department: Medical Service in the War Against Japan* (Washington, DC: Department of the Army, 1997) 160.

⁸ Ibid., 161.

⁹ The Public's Library and Digital Archive, "FM 31-5: Landing Operations on Hostile Shores," accessed 8 January 2015, <http://www.ibiblio.org/hyperwar/USA/ref/FM/FM31-5/index.html#contents>.

¹⁰ Condon-Rall, *The Medical Department*, 161.

¹¹ The Public's Library and Digital Archive, "FM 31-5: Landing Operations on Hostile Shores," accessed 8 January 2015, <http://www.ibiblio.org/hyperwar/USA/ref/FM/FM31-5/index.html#contents>.

¹² G. E. Stratmeyer, *Arctic Manual* (Washington, DC: Department of the Army, 1940), 289-302.

¹³ George C. Marshall, *FM 31-15: Operations in Snow and Extreme Cold* (Washington, DC: Department of the Army, 1941), II.

¹⁴ Ibid., 48-50.

¹⁵ Whayne and DeBakey, *Cold Injury, Ground Type*, 83.

¹⁶ Stratmeyer, *Arctic Manual*, 243-254.

¹⁷ Ibid., 253.

- ¹⁸ Whayne and DeBakey, *Cold Injury, Ground Type*, 83.
- ¹⁹ Garfield and Cole, *The Thousand-Mile War*, 196-197.
- ²⁰ Perras, *Stepping Stones to Nowhere*, 127.
- ²¹ Marshall, FM 31-15, *Operations in Snow and Extreme Cold*, 5-7, 9, 44.
- ²² Whayne and DeBakey, *Cold Injury, Ground Type*, 89.
- ²³ Garfield and Cole, *The Thousand-Mile War*, 199.
- ²⁴ *Ibid.*, 199.
- ²⁵ Veterans History Project, “William Argyl Anderson Interview by Paul LaRue,” accessed 7 February 2015, <http://lcweb2.loc.gov/diglib/vhp/story/loc.natlib.afc2001001.38441/>.
- ²⁶ Veterans History Project, “Dean E. Galles Interview by Christin Siefert.”
- ²⁷ Garfield and Cole, *The Thousand-Mile War*, 199-201.
- ²⁸ *Ibid.*, 200.

CHAPTER 4

BATTLE OF ATTU

They practiced amphibious tactics but received no training in protecting themselves against the cold, and the medics learned nothing of the problems they would face in the mountainous country that lay ahead.

—Mary Ellen Condon-Rall, *The Medical Department: Medical Service in the War Against Japan*

The Battle of Attu was the United States infantry's first combat amphibious island landing operation.¹ When planning to recapture Attu, leaders assumed the battle would last three days while in reality the operation ended up taking over three weeks. This chapter will focus on answering the thesis question regarding the impact of training and equipment on the 7th Infantry Division's counter-offensive operation on Attu. The chapter will start with an overview of combat actions on Attu in order to provide an orientation of the operational environment. The lack of appropriate training and ineffective equipment will be discussed in the following segments of the operation: amphibious landing on the beaches and mountain warfare interposed with the resulting cold-weather injuries impact on personnel from the Battle of Attu. Oral interview excerpts will further add supporting evidence to answer the thesis questions. Next, the chapter will examine the outcome of the additional training of the Provisional Scout Battalion, led by Captain Willoughby. Finally, the chapter will discuss how the leaders adjusted planning based on the lessons learned for subsequent operations in the Aleutian Campaign to recapture Kiska.

Five courses of action, Plan's A through E, were prepared due to lack of information on topography and offshore hazards. Plan E called for three landing sites and

was ultimately selected. The southern landing force was the decisive operation, landing at Massacre Bay, supported by two Northern landings decided most feasible on D-day based on reconnaissance. (see Figure 3) The Northern and Southern landing forces would then attack up the valley, seizing key terrain of the passes leading to Holtz and Sarana Bays, then move into the Holtz Bay area. Upon the two forces linking up, the Southern landing force would attack into Chichagof Harbor, the main Japanese base and ultimate objective.² To shape the battlefield prior amphibious landing operations, a three-week combined air and naval bombardment had been conducted on Attu and Kiska. Unfortunately, poor weather had limited the air and naval strike effects. In addition, bad weather delayed the 7th ID convoy's departure from Cold Bay and caused an additional delay as the convoy neared Attu, unable to land until 11 May 1943.³

Early on the morning of 11 May 1943, the 7th Scout Company, led by Captain Willoughby, paddled ashore landing at Beach Scarlet as part of the Northern landing force. The Scout Company moved inland as there was no enemy opposition. The remainder of the Provisional Scout Battalion landed at noon, linked up with the Scout Company, and proceeded to occupy the valley leading into West Arm of Holtz Bay.⁴ At the same time, the second landing site of the Northern landing force consisting of the 1st Battalion of the 17th Infantry began amphibious landing operations at Beach Red with the purpose to seize "Hill X," then attack the enemy from their rear area. The landing of 1st Battalion was the trigger to start the decisive operation at Massacre bay consisting of 2nd and 3rd Battalion Combat Teams of the 17th Regiment at Beaches Blue and Yellow. Both Northern and Southern Forces encountered the enemy by 1900 on the first day, but

not before a total of 3,500 men got ashore with 400 at Beach Scarlet, 1,100 at Beach Red, and 2,000 at Beaches Blue and Yellow.⁵

While the weather and fog concealed the amphibious landings from the Japanese, it also delayed the landing of Northern and Southern reinforcements until 12 May, consisting of 3rd and 2nd Battalions of the 32nd Infantry Regiment, respectively. Even with arriving reinforcements, both forces struggled to gain ground for the next three days. The Northern landing force encountered the enemy defenses on Hill X and beach defenses in the valley of Beach Scarlet, impeding the linking up of the Provisional Battalion with the two battalions from Beach Red. Similarly, the Southern landing force encountered Japanese outer defenses along the ridges above Massacre Valley, Chichagof Harbor, south to Jarmin Pass, and east to Sarana Bay.⁶ The Japanese ridge defenses consisted of antiaircraft batteries, mountain artillery, and machine gun and mortar positions.⁷

Between 15 and 18 May 1943, success remained bleak but the battle started to shift in favor of the 7th ID forces. On the morning of 15 May, the Northern landing force found the enemy near Hill X had pulled back in the night and allowed linkup of the three Northern battalions. The Northern landing force fought to control the north end of Moore Ridge and forced a further withdrawal to Chichagof Harbor by Japanese forces the night of 16-17 May. The morning of 17 May, patrols in both Northern and Southern forces found defensive position abandoned. The enemy withdrawal allowed the Southern force to occupy Jarmin Pass, and subsequent linkup with Northern force on 18 May, a turning point in the battle. Unfortunately for MG Brown, he was relieved of command and replaced by MG Landrum on 16 May. Admiral Kinkaid and General DeWitt developed

concern over Brown's continued request for reinforcements, large quantities of engineer and road-building equipment, and lack of advancement towards operation success.⁸ (see figure 3)

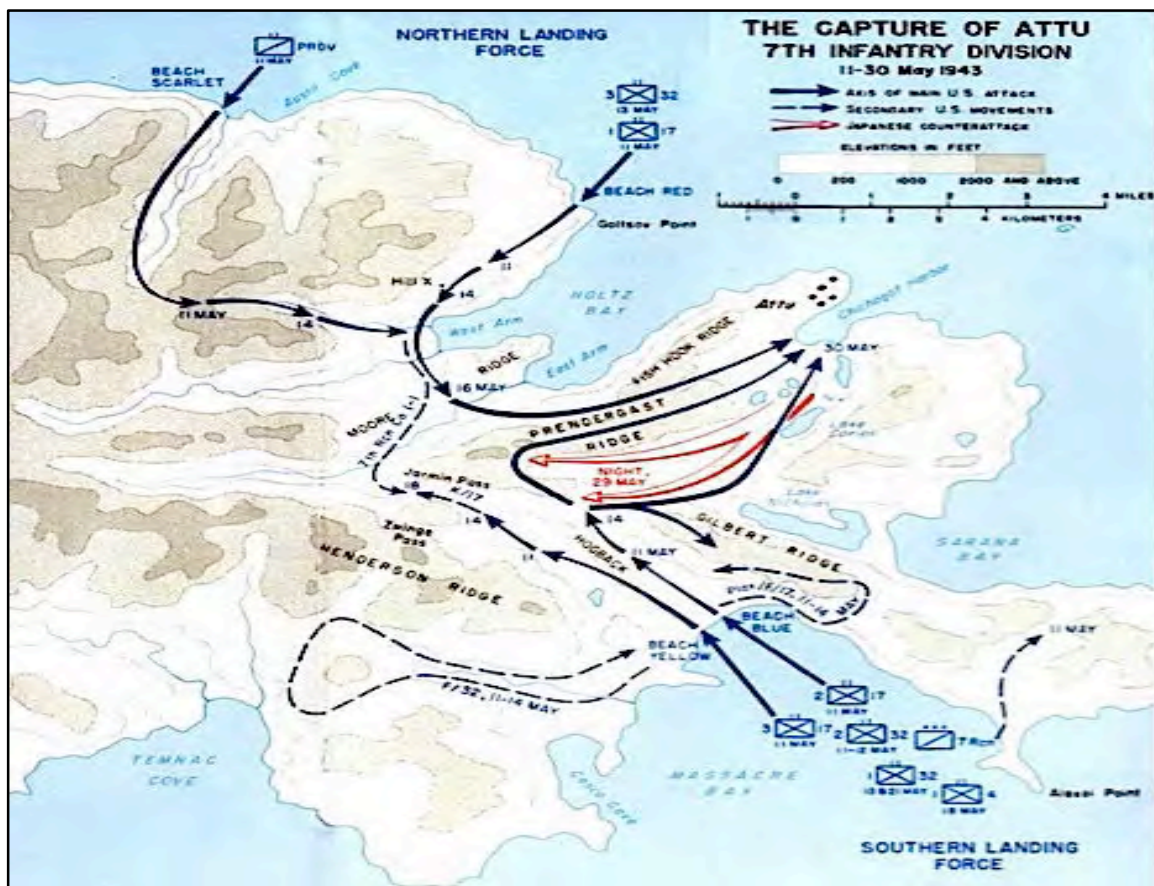


Figure 3. The Battle of Attu (cropped for size)

Source: Stetson Conn, Rose C. Engelman, and Byron Fairchild, *The Western Hemisphere: Guarding the United States and Its Outposts* (Washington, DC: Department of the Army, 1964), accessed 7 February 2015, <http://www.history.army.mil/books/wwii/Guard-US/maps/map3.htm>.

Over the next two weeks, there was costly fighting as American forces slowly cleared machine gun and mortar nests left by retreating Japanese and surrounded

Chichagof Harbor. On the night of 29 May, a wild charge of 700-1,000 Japanese troops attacked American lines, screaming, killing, and being killed. Although the enemy announced the loss of Attu on 30 May, American forces cleared out pockets of surviving Japanese troops for several days from Chichagof installations. Japanese losses were approximately 2,350 KIA and only 29 enemy soldiers taken as prisoner.⁹ The aftermath across the American assault force was the following 549 KIA; 1,148 WIA; severe cold injury 1,200; disease (includes exposure) 614; and other (self-inflicted, mental health, drowning, and accidents) 318. In proportion to American troops engaged, the Battle of Attu ranks as the second most costly in the Pacific Theater. The American casualties exceeded the number of Japanese soldiers on the island.¹⁰

Now to explore how the training and equipping impacted the operations. Even though amphibious operations were completed without incident from the enemy, the tundra started impacting operations shortly after landing. Many vehicles and artillery never left the beaches, so the operation became dependent on dismounted infantry personnel. The following account is from SSG Stanley E. West, SSG Allen W. Robbins, and CPL Howard B. Campbell from Battery C, 48th Field Artillery Battalion:

The battery was busy getting up its own fire-direction center, as the big tractors lumbered into the spongy, yielding tundra dragging the guns slowly behind. Almost seventy-five yards from the beach the treads of the first cat chewed through the tundra and began to slip. In just seconds it was wallowing helplessly in the black oozy mud. The other two cats soon shared the same fate. When the tundra broke, the big treads turned round and round and only dug the machine deeper into the mud. What the hell, seventy-five yards was far enough initially! The crews swung the big guns around and pointed them into the valley. They were setting up.¹¹

The vehicles that were able to get beyond the beach took significant effort and continued to have difficulty on the tundra. PFC Morris R. Madison Company D from the 17th

Infantry, at Beach Red said, “The jeep had to be winched up the steep incline form Red Beach, and we were harassed a bit in getting it done, but it was a good system. . . . The tundra was terrible to drive over. It was treacherously soft and full of holes. I wasn’t used to it at all, so of course I got stuck.”¹²

The useless vehicles created a supply problem, primarily for the soldiers that had advanced the farthest from the beaches. The confusing beaches were littered with vehicles so that all supplies had to be hand-carried. Some units had to wait twenty-four hours for resupply of ammunition and food.¹³ Compounding the supply issue, an essential supply transport, *Perida*, was beached on an outcropping of land too far to be unloaded by hand. On Adak and Amchitka, the weather grounded the Air Force as they listened to urgent radio calls for airdrop requests for socks, sleeping bags, and food from ground troops in the Attu ridgelines.¹⁴

In regards to personal equipment, many troops went ashore without their rucksacks, perceived as too bulky, and relied only on canvas field bags on their belt. They were not permitted to wear rain suits, so they were drenched immediately. The plan called for the rucksacks to be brought by night on the first day of landings and containing rain suits, sleeping bags, and other supplemental equipment. Unfortunately, weather impeded this plan so that few received their rucksacks until the fourth or fifth day if at all. The soldiers only had a shelter half from their canvas field bag for sleeping.¹⁵ CPL Paul H. Doty details the following incident when searching for soldiers left behind on a mountain in Massacre Valley, “They had crawled back between two big boulders, out of the wind, wrapped up in all the shelter halves that they had, and were sleeping all in a pile.”¹⁶

Many survivors described the unsatisfactory clothing that was issued for the rigorous conditions on Attu. The clothing was not warm or adequately waterproofed for the wind, icy rain, and waterlogged tundra. The issued service boots were better suited for damp underbrush in northern woods of the United States not for hours standing in freezing pools of water. Shoepacs would have been better for the Alaska conditions. Once these deficits in equipment were noted, efforts were made to get additional equipment but the stuck vehicles limited supply efforts so that personnel had to hand carry equipment.¹⁷ Dean E. Galles, 7th ID Attu veteran, provides this descriptive narrative on personnel equipment problems, the resulting injuries, and the care provided:

But anyway, we moved up, kept moving up the valley, and, of course, we found out that, and we were so ill equipped, clothing wise. We had leather Blucher boots, and by being continually wet all the time, they just fell apart. And after about two weeks of fighting, they called us back to the beach, and they said, take your shoes and socks off, of what you've got left. I was so amazed. My feet were black with, I guess fungus or mold. Mold I suppose. And they said wipe all that off, and so we wiped that off, and they brought in 25-pound buckets of lard from the Navy, and said coat your feet with lard, put on dry socks, new boots, same kind of boots, and get going again. Well, this resulted in what they called immersion foot up there, which is a combination of frostbite and fungus. And some of the guys, when they would rub the mold off of their feet, it became infected and gangrene set in, and there was some amputations. And there was one or two, I'm sure, that died from gangrene, because they didn't know what it was, or, I mean it, they weren't aware of how they could combat it. . . But to get back to the uniform, the light jackets we had were just nothing for what we needed. We needed parkas, we needed shoepacs on our feet, and we needed something we could put up over our heads in the wind and the storms and stuff. And we never did have gloves, we had what they called wristlets, which was a wrist-type deal that had your fingers out, so you could fire and stuff, and stuff, but, and we could, we had pockets we could put our hands in. But, anyway, we were just not equipped for that. And there were units up in the Alaska Defense, and they had shoepacs, and they had parkas, and they had arctic sleeping bags. Now, we didn't have any arctic sleeping bags until, oh, I'd say about two or three, a good two weeks after we were on the island. And they brought up these arctic sleeping bags, which was a two-unit affair. You had the inner one that would zip up around and you had your head out. You had your outer one that would come up over your head, and we'd split them up, and then we'd, some nights, somebody had a

sleeping bag, and the rest of them didn't, and we just had enough to barely get along.”¹⁸

While another veteran, Gerard Vincent Radice, put it more succinctly stating, “We didn’t have the right equipment for Attu. We didn’t have the right boots, we didn’t have the right clothing, we still had suntans, we didn’t have wool clothing. We had blankets when we needed sleeping bags.”¹⁹ The leather service boots caused the soldier’s feet to perspire, which almost immediately froze and introduced frostbite. Assuming personal risk from friendly fire, some American soldiers resorted to wearing caps, hoods, and waterproof boots salvaged from dead Japanese.²⁰

Before he was relieved of command, General Brown visited the front lines and recognized that his soldiers were not equipped with clothing warm enough for Attu. He observed that his soldiers were frostbitten, feverish, and unconscious from exposure to the cold climate. General Brown immediately ordered a rotation to heated tents established in the rear area so that each battalion could spend one out of three days in a heated tent.²¹

Both the tundra and the mountainous terrain hindered medical care. Many injuries left the soldiers unable to walk, but the wheeled litters were useless on the terrain. Often casualties had to be carried for hours whereas some had to crawl to get medical assistance due to evacuation difficulties. Casualties with lower extremity cold-weather injuries frequently had to violate the first principle of treatment by walking to battalion aid stations. The mountainous terrain proved difficult to navigate as casualties were evacuated using ropes, pulleys, and improvised elevators.²² SSG Ernest Briggs, Company B, 7th Medical Battalion a medic caring for the wounded in Massacre Valley said:

Getting the men out of the draw up the nearly vertical sides presented a big problem. The sides were soggy where the tundra grew, and slick as grease where they were barren. We tied the patients onto their litters, and several men scaled the wall taking a long rope with them. We fastened the end of the rope to a litter, and six men moved up the wall with the litter.²³

The 7th ID soldiers were not trained in self-care preventive measures like changing socks, removing boots, and drying insoles, and the lack of training compounded the lower extremity injury rates. Many soldiers were inactive in their cold, water filled foxhole with little sleep or physical rest, not knowing the value of moving their feet or exercising their legs. One battalion implemented foot-care drills, self-foot massage with lubricants, and opportunities to change shoes and socks with only eight incidences of trench foot. However, the lowest cold weather injury rates were reported in a detachment of Alaskan Scouts, who were acclimated, accustomed to environmental conditions, and experienced with cold weather preventative measures. They had one case of a slight cold injury.²⁴

Certainly the additional training and equipping conducted by Captain Willoughby and the Provisional Scout Battalion would prove beneficial for operations in the Aleutians. When the Provisional Scout Battalion started amphibious operations, the soldiers launched from submarines on rubber boats. The narrow twenty-five inch submarine hatch forced the troops to leave almost all of food supplies so that they only carried a day and half of rations. As they advanced from Beach Scarlet, they were blasted by wind and snow in the ridges heading towards Holtz Bay. The Provisional Scout Battalion attempted to get resupply of food, medicine, and ammunition by parachutes, but the wind blew the chutes into a crevasse beyond reach of Captain Willoughby's soldiers. Even for the handpicked soldiers in top physical condition, the tundra and snow made for

slow, painful advance. Captain Willoughby fought to keep his soldiers moving, but some found places to lie down and hide, latter waking to severe frostbite.²⁵

By the third morning on 13 May 1943, the Japanese in the mountains above Holtz Bay pinned down Captain Willoughby's battalion. They were out of food and exposed to extreme cold whilst mocked in English by Japanese officers with megaphones. In a snow cave that evening, Captain Willoughby and his men huddled around a small fire, burned ration boxes, and tried to warm their stiff hands. Captain Willoughby had instructed his soldiers in preventative health measures, but many soldiers did not keep moving, rub their feet, or change socks when needed. The evening of day four, 14 May 1943, half of the soldiers were wounded, sick, or suffering from frostbite. That night, to the benefit of Captain Willoughby, the Japanese withdrew from the Holtz Valley leaving behind stores of ammunition, food, field pieces, mortars, and machine guns. The Provisional Scout Battalion was able to link up with the other units in the Northern landing force in the vicinity of the West Arm of Holtz Bay. Captain Willoughby only had forty soldiers that could walk without pain, whereas the remainder had foot injuries, gangrene later requiring amputation, and ulcerated knees from crawling when they could no longer walk. After evacuating hospital cases, the Provisional Scout Battalion was down 61% of the original strength from 420 men to 165.²⁶ Despite the additional training conducted by Captain Willoughby, the terrain and weather negatively impacted his unit strength; in all probability, the casualty rate would have been higher without the additional training.

Even before fighting had started on Attu, General DeWitt had started planning and training for an amphibious operation to recapture Kiska. Based on the results of the Attu operation and revised enemy estimates, the assault force was doubled in size

augmented with a mountain combat team, regional combat team from Alaska Defense Command, and the First Special Service Force, trained in the type of fighting developed on Attu.²⁷ The soldiers were issued a fifty-two page *Soldiers Manual* that included lessons learned from Attu on foot care, foxholes, food, and drying clothing. The Kiska force was equipped with new Arctic gear and trained amphibious landings on Adak; equivalent terrain and weather conditions for the operation.²⁸

During the months of June, July, and August of 1943, the Eleventh Air Force and naval task groups conducted heavy pre-invasion bombardment of Kiska on multiple occasions for a total of 1,106 tons of bombs. Intriguingly, the pilots noted little flak or small arms fire from the enemy while noting no signs of activity on Kiska. Leaders and planners suspected that the Japanese were preparing defenses in the mountains away from destroyed installations, preparing for the American amphibious counter-offensive. On 15 August, the Kiska task force landed on the north and west sides of the island with no enemy encountered, just like on Attu. For the next several days, patrols continued to search the island for the enemy opposition only to embarrassingly recognize that the Japanese had evacuated the island, possibly as early as 28 July 1943.²⁹

The lessons learned from the Battle of Attu would impact cold weather medical treatment and planning for the upcoming Italian Campaign with changes made to footgear, clothes, tents, and food.³⁰ The preferred type of foot gear, importance of exercise, foot self-care, sock combinations, and other preventive measures was published in the *Principles of Cold Weather Clothing and Equipment* (TM 10-275) by the Office of the Quartermaster in October 1944.³¹ Several officers from the Aleutian Island landings

would also assist in planning the amphibious invasion of Normandy during Operation Overlord in 1944.³²

In summation, the chapter discussed the result of mismatched training on diverse terrain of dessert compared to tundra and muskeg in the Aleutians. The soldiers of the 7th ID were unprepared for the cold weather conditions to be encountered on the island of Attu. Even the Provisional Scout Battalion, under the leadership of Captain Willoughby, who conducted additional cold weather training and equipment issue upon arrival in Alaska were not prepared for the conditions in the Aleutians. The unit that suffered the least was the Alaskan Scouts who were acclimatized and accustomed to their equipment and experienced in cold weather conditions. Based on the outcome of the 7th ID, an assumption can be postulated that there is no better substitute for Arctic operations than having prior experience in the terrain and weather conditions to be encountered. In the next chapter, the current relevance of the Battle of Attu will be explored in regards to the United States Arctic Strategy.

¹ Garfield and Cole, *The Thousand-Mile War*, 207.

² Conn, Engelman, and Fairchild, *The Western Hemisphere*, 283-284.

³ MacGarrigle, *Aleutian Islands*, 17.

⁴ Conn, Engelman, and Fairchild, *The Western Hemisphere*, 285.

⁵ MacGarrigle, *Aleutian Islands*, 17-20.

⁶ Ibid., 19-21.

⁷ Conn, Engelman, and Fairchild, *The Western Hemisphere*, 282.

⁸ MacGarrigle, *Aleutian Islands*, 21-22.

⁹ Conn, Engelman, and Fairchild, *The Western Hemisphere*, 294-295.

- ¹⁰ Garfield and Cole, *The Thousand-Mile War*, 256.
- ¹¹ Mitchell, *The Capture of Attu*, 44-45.
- ¹² *Ibid.*, 92.
- ¹³ Garfield and Cole, *The Thousand-Mile War*, 215-216.
- ¹⁴ *Ibid.*, 226-227.
- ¹⁵ Wayne and DeBakey, *Cold Injury, Ground Type*, 90.
- ¹⁶ Mitchell, *The Capture of Attu*, 52-53.
- ¹⁷ *Ibid.*, 11.
- ¹⁸ Veterans History Project, "Dean E. Galles Interview by Christin Siefert," accessed 7 February 2015, <http://lcweb2.loc.gov/diglib/vhp/story/loc.natlib.afc2001001.76663/>.
- ¹⁹ Veterans History Project, "Gerard Vincent Radice Interview by Kevin Haney," accessed 7 February 2015, <http://lcweb2.loc.gov/diglib/vhp/story/loc.natlib.afc2001001.73953/>.
- ²⁰ Garfield and Cole, *The Thousand-Mile War*, 227, 239.
- ²¹ *Ibid.*, 225.
- ²² Wayne and DeBakey, *Cold Injury, Ground Type*, 88.
- ²³ Mitchell, *The Capture of Attu*, 61.
- ²⁴ Wayne and DeBakey, *Cold Injury, Ground Type*, 92-95.
- ²⁵ Garfield and Cole, *The Thousand-Mile War*, 208, 214-216.
- ²⁶ *Ibid.*, 221, 226-229.
- ²⁷ Conn, Engelman, and Fairchild, *The Western Hemisphere*, 295-296.
- ²⁸ Garfield and Cole, *The Thousand-Mile War*, 285-286.
- ²⁹ Conn, Engelman, and Fairchild, *The Western Hemisphere*, 296-298.
- ³⁰ Garfield and Cole, *The Thousand-Mile War*, 256-257.
- ³¹ Wayne and DeBakey, *Cold Injury, Ground Type*, 70.

³² Roland G. Ruppenthal, *Logistical Support of the Armies: Volume 1 May 1941-September 1944* (Washington, DC: Department of the Army, 1995), 335.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Don't wish it was easier; wish you were better. Don't wish for less problems; wish for more skills. Don't wish for less challenges; wish for more wisdom.

— Jim Rohn

In the final chapter, this study will discuss the current relevance of lessons learned from the Battle of Attu in regards to the National Strategy for the Arctic Region. In order to establish a frame of reference, the chapter will provide with an overview of the Department of Defense Arctic Strategy to include ends, ways, and means. The Northern Warfare Training Center based at Fort Wainwright, Alaska is the Army's only cold region training proponent and conducts various training at Black Rapids Training Site.¹ This chapter will include an investigative assessment of the United States resources dedicated to Arctic Region with supporting critiques from additional sources, then conclude the chapter with recommendations from this study and previous studies.

The Arctic Research and Policy Act of 1984 defines the Arctic as “all United States and foreign territory north of the Arctic Circle and all United States territory north and west of the boundary formed by the Porcupine, Yukon, and Kuskokwim Rivers; all contiguous seas, including the Arctic Ocean and the Beaufort, Bering and Chukchi Seas; and the Aleutian chain.”² Therefore, lessons learned from the Battle of Attu in the Aleutians can be applied across the Arctic region. The Americans won the costly battle by committing ample troops to compensate for battle and cold weather injuries encountered. The Americans had over 3,800 casualties against 2,900 Japanese forces with thirty-one percent of American casualties related to cold weather injury.

When comparing the 7th ID cold weather injuries to the Alaskan Scouts, the Arctic is an operational environment that favors the prepared, acclimatized units. The cold-weather injury rates were significantly lower for the Alaskan units that fought at the Battle of Attu. The Alaskan Scout unit, consisting of 30 personnel, only had one case of a slight cold injury. The lesson learned from the Battle of Attu is that knowledge of Arctic conditions can mitigate risk of cold injury but training should include firsthand experience to foster understanding not just didactic training. Fortunately, the Americans at the Battle of Attu overcame the adverse climate but at a cost of eight percent of troops enduring severe cold injury.

Another important lesson learned from the Battle of Attu is the consequence of not having Arctic specific equipment. The 7th ID soldiers fighting at Attu had only been issued their equipment on ships already heading to Alaska, with little time to provide familiarity or breaking in of their service boots. The Battle of Attu demonstrated the effect of Arctic terrain on personnel and vehicle maneuverability. As will be discussed next, recent global events in the Arctic region indicate the United States ought to reassess fulfillment of the Arctic Strategy and address gaps in Arctic capabilities.

Even since starting this historical study on the Battle of Attu, global events occurred to indicate increased concern regarding regional tension over Arctic geopolitical security, primarily over the resources of natural gas and oil reserves. The principal country posturing for supremacy of the region is Russia, fueled by concern that of the five of the eight countries in the Arctic Council are also NATO members. In addition, the Arctic Northern Route from Asia to Europe offers economic development opportunities in Russia. Russia is reactivating and renovating Soviet era bases, airstrips, and relocating

two-thirds of the Northern Fleet in the Arctic. Before the end of 2015 in the Arctic region, estimates of Russian armed forces include 56 military aircraft, 122 helicopters, and 14 military airfields operational along Russia's northern seaboard. In order to increase capabilities, the Kremlin increased defense spending by 20 percent.³

Fortunately, military authorities suggest an unlikely desire for conflict despite the perception of an aggressive Russia expansion in the Arctic. Yet, Norway and Canada have taken corresponding actions to develop and posture their Arctic capabilities. Norway, bordering Russia, is the lead advocate for NATO presence in the Arctic and proposes a larger NATO role in the region.⁴ Norway is taking action to increase their High North defense structure to consist of "an Air Force equipped with F-35s, forward Army battalions deploying CV90 tracked armored fighting vehicles and high mobility Archer artillery units, and a stronger Navy operating anti-aircraft and submarine-hunting Arctic-class Fridtjof Nansen frigates and Skjold corvettes."⁵ Similarly, Canada is taking measures to construct five arctic offshore patrol ships with onboard combat systems at a cost of \$3.4 billion and upgrade Royal Canadian Air Force's CC-138 Twin Otter aircraft, Arctic utility transport, at a cost of \$20 million to \$49 million.⁶

In May of 2013, the United States published the *National Strategy for the Arctic Region*. While later the same year, the DoD published a corresponding *Arctic Strategy* in November 2013. For reference, an operational approach developed from the National Strategy is included in Appendix A, and a consolidated ends, ways, means, and risks from the DoD strategy is located in Appendix B. In the DoD strategy, the center of gravity is listed as strategic partnerships with the United States "participating in multilateral exercises like the Search and Rescue Exercise (SAREX) hosted by

Greenland, Cold Response hosted by Norway, and Canada's Operation Nanook.”⁷ The largest of the Arctic multinational exercises is the Norwegian Cold Response, which in 2014 hosted 16,000 soldiers from 16 countries.⁸ In comparison, Russia had a domestic Arctic five-day exercise that consisted of 38,000 servicemen, 50 surface ships and submarines, and 110 aircraft.⁹

At the time of developing the strategic documents, the risks associated with the DoD strategy included defense budget and appearance of an “arms race.”¹⁰ However, recent global developments discussed above and NATO members calling for an increased Arctic presence by the United States support the necessity to match Arctic capabilities with multinational partners. At a meeting between lawmakers and top Pentagon officials, concerns were raised regarding Russia's Arctic capability to include reactivating four Arctic brigades while the United States NORTHCOM struggles to reliably navigate, communicate, and sustain forces in the Arctic. Dan Sullivan, Alaskan Senator, forewarns; “We have a 13-page Arctic strategy that nobody seems to be paying attention to in my view.”¹¹

An article from *Military Review* discussed the need for improved unity of effort to implement the Arctic Strategy at the operational and tactical level. In regards to equipment, the author states currently the Arctic equipment is outdated and inadequate. For example, the rucksacks would compress clothing insulation in the shoulder region which would then contribute to decreased circulation to the upper extremities and increase the risk of cold weather injury. For training, the author asserts that the Army has succumbed to the fallacy that soldiers stationed in northern regions or cold climates are prepared for Arctic combat. An example is training for use of skis or snowshoes in Arctic

operations. Only a fraction of soldiers are able to master the necessary skill of skiing. The author notes the importance of constant training in Arctic environment for success in overcoming the significant challenges in the harsh Arctic environment not just possessing the equipment.¹²

In closing, the Battle of Attu provides a historical example of the importance of training and equipping for Arctic operations. In the evolving Arctic geopolitical environment, the United States must be prepared for Arctic operations should NATO or other Arctic nations necessitate our regional involvement to preserve strategic national interests. The following are recommendations to be considered by various groups. With current fiscal restraints, lawmakers ought to allocate funds in reasonable amounts to meet the national strategic goals. While DoD leadership should consider the actions of Norway, Canada, and Russia as shift in Arctic attention, and as such the United States military must have analogous Arctic capability to meet Arctic Strategy goals. One proposal put forth by a Naval War College study was the creation of a Joint Arctic Combat Training Center. Fort Greely, Alaska is currently the home of the Cold Regions Test Center with an area of 169.7 square miles, ample space for a brigade sized operational exercise. As Russia reopens Soviet era Arctic bases, another grand proposal is to increase Alaskan bases along the Arctic Sea or reopen Aleutian basing. Whether climate change will impact the access to the Arctic in the coming years, the United States military must be prepared for contingencies in the harsh region or be willing to accept risk for cold-weather injuries if an unprepared or ill-equipped unit is ever required to operate in the Arctic at short notice.

¹ “Home,” Northern Warfare Training Center, last modified not provided, accessed 12 March 2015, <http://www.wainwright.army.mil/nwtc/index.html>.

² Arctic Research and Policy Act of 1984, Pub. L. 98–373, title I, § 112, July 31, 1984, 98 Stat. 1248.

³ STATFOR: Global Intelligence, “Russia’s Plans for Arctic Supremacy,” last modified 16 January 2015, accessed 26 March 2015, <http://www.stratfor.com/analysis/russias-plans-arctic-supremacy>.

⁴ Ibid.

⁵ Gerard O’Dwyer, “Norway Prioritizes High North Equipment,” *Defense News*, last modified 11 March 2015, accessed 26 March 2015, <http://www.defensenews.com/story/defense/policy-budget/warfare/2015/03/03/norway-russia-arctic-northern-high-north-archer-cv90/24272749/>.

⁶ David Pugliese, “Canada Breaking Logjam on Arctic Equipment,” *Defense News*, last modified 11 March 2015, accessed 26 March 2015, <http://www.defensenews.com/story/defense/land/weapons/2015/03/11/canada-arctic-navy-ships-transport-satellite-polar-surveillance/24318527/>.

⁷ Department of Defense, *Arctic Strategy* (Washington, DC: Office of United States Defense, November 2013) 7.

⁸ Norwegian Armed Forces, “About Cold Response,” last modified 7 March 2014, accessed 27 March 2015, <http://mil.no/exercises/coldresponse/Pages/about.aspx>.

⁹ Joe Gould, “Lawmakers Press Top Officers for Arctic Plans,” *Defense News*, last modified 20 March 2015, accessed 27 March 2015, <http://www.defensenews.com/story/defense-news/blog/intercepts/2015/03/20/lawmakers-press-pentagon-officials-for-arctic-plans/25092543/>.

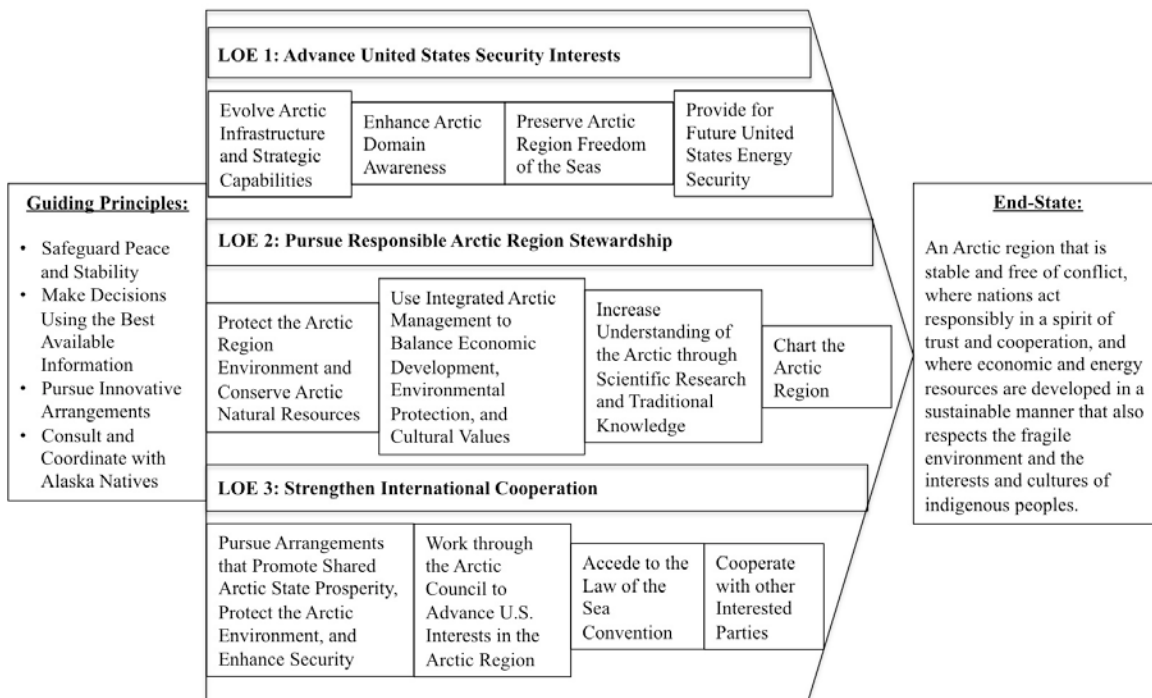
¹⁰ Department of Defense, *Arctic Strategy*, 12-13.

¹¹ Gould, “Lawmakers Press Top Officers for Arctic Plans.”

¹² Nathan Fry, “Survivability, Sustainability, and Maneuverability: The Need for Joint Unity of Effort in Implementing the DOD Arctic Strategy at the Tactical and Operational Levels,” *Military Review* (November-December 2014): 54-62.

APPENDIX A

2013 National Strategy for Arctic Region: Operational Approach



Source: White House, *National Strategy for the Arctic Region* (Washington, DC: Office of the President of the United States of America, May 2013), 6-11.

APPENDIX B

DoD 2013 Arctic Strategy: Ends, Ways, Means, and Risks

Ends	Ways	Means	Risks
Ensure security, support safety, and promote defense cooperation	Exercise sovereignty and protect the homeland	Protect the homeland and exercise sovereignty	Projections about future access to and activity in the Arctic may be inaccurate
	Engage public and private sector partners to improve domain awareness in the Arctic	Engage public and private sector partners to improve all domain awareness in the Arctic	
	Preserve freedom of the seas in the Arctic	Preserve freedom of the seas in the Arctic	
	Evolve Arctic infrastructure and capabilities consistent with changing conditions	Evolve Arctic infrastructure and capabilities consistent with changing conditions	Fiscal constraints may delay or deny needed investment in Arctic capabilities, and may curtail Arctic training and operations
	Support existing agreements with allies and partners while pursuing new ones to build confidence with key regional partners	Uphold existing agreements with allies and partners while building confidence with key regional partners	Political rhetoric and press reporting about boundary disputes and competition for resources may inflame regional tensions
Prepare for a wide range of challenges and contingencies	Provide support to civil authorities, as directed	Provide Defense Support of Civil Authorities (DSCA) in Alaska and provide Foreign Humanitarian Assistance and Foreign Disaster Relief (FHA/FDR) in other non-U.S. territorial areas of the Arctic	Being too aggressive in taking steps to address anticipated future security risks may create the conditions for mistrust and miscommunication under which such risks could materialize
	Partner with other departments and agencies and nations to support human environmental safety	Partner with other departments and agencies and nations to support human environmental safety	
	Support the development of the Arctic Council and other international institutions that promote regional cooperation and the rule of law	Support the development of the Arctic Council and other international institutions that promote regional cooperation and the rule of law	

Source: Department of Defense, *Arctic Strategy* (Washington, DC: Office of United States Defense, November 2013), 5-13.

BIBLIOGRAPHY

- Barnes, Alexander, and Cassandra Rhodes. "The Polar Bear Expedition: The U.S. Intervention in Northern Russia, 1918-1919." *Army Sustainment* 44 (March/April 2012): 52-57.
- Bechtol, John. "Fighting the Cold: the Need for Standing Cold Weather Combat Capabilities." Research Paper, Naval War College, February 2002.
- Bennett, J. G. "Two Years in the Aleutian Area: Personal Experience of a Battalion Commander." Monograph, School of Combined Arms, 1946-1947.
- Benson, John, and Takao Matsumura. *Japan 1868-1945: From Isolation to Occupation*. New York, NY: Routledge, 2014.
- Bodner, Matthew, and Alexey Eremenko. "Russia Starts Building Military Bases in the Arctic." *The Moscow Times*, 8 September 2014. Accessed 3 November 2014. <http://www.themoscowtimes.com/business/article/russia-starts-building-military-bases-in-the-arctic/506650.html>.
- Burks, Robert. "Logistics Problems on Attu." *Army Logistician* (May/June 2003): 34-37.
- Chew, Allen F. Leavenworth Papers No. 5, *Fighting the Russians in Winter: Three Case Studies*. Fort Leavenworth, KS: Combat Studies Institute, December 1981.
- Condon-Rall, Mary Ellen, and Albert E. Cowdrey. *The Medical Department: Medical Service in the War Against Japan*. Washington, DC: Center of Military History, Department of the Army, 1997.
- Conn, Stetson, Rose C. Engelman, and Byron Fairchild. *The Western Hemisphere: Guarding the United States and Its Outposts*. Washington, DC: Department of the Army, 1964.
- Department of Defense. *Arctic Strategy*. Washington, DC: Office of United States Defense, November 2013.
- . Report to Congress on Arctic Operations and the Northwest Passage. Washington, DC: Office of United States Defense, May 2011.
- English, R. O. "The Operations of the 3D Battalion, 17th Infantry (7th Infantry Division) in the Attack of a Ridge Nose, Attu Island, 21-22 May 2943." Paper, Advanced Infantry Officers Class 1949-1950.
- Fry, Nathan. "Survivability, Sustainability, and Maneuverability: The Need for Joint Unity of Effort in Implementing the DOD Arctic Strategy at the Tactical and Operational Levels." *Military Review* (November-December 2014): 54-62.

- Garfield, Brian, and Terrence Cole. *The Thousand-Mile War: World War II in Alaska and the Aleutians*. Garden City, NY: Doubleday and Company, 1969.
- Glines, C. V. "William 'Billy' Mitchell: An Air Power Visionary." History.net. Accessed 5 January 2015. <http://www.historynet.com/william-billy-mitchell-an-air-power-visionary.htm>
- Gould, Joe. "Lawmakers Press Top Officers for Arctic Plans." *Defense News*. Last modified 20 March 2015. Accessed 27 March 2015. <http://www.defensenews.com/story/defensenews/blog/intercepts/2015/03/20/lawmakers-press-pentagon-officials-for-arctic-plans/25092543/>.
- Grau, Lester W., and Charles K. Bartles. *Mountain Warfare and Other Lofty Problems: Foreign Perspectives on High Altitude Combat*. Fort Leavenworth KS: Foreign Military Studies Office, 2011.
- Hays, Otis. *Alaska's Hidden Wars: Secret Campaigns on the North Pacific Rim*. Fairbanks, AK: University of Alaska Press, 2004.
- Johnson, Robert L. "Aleutian Campaign, World War II: Historical Study and Current Perspective." Master's Thesis, Command and General Staff College, 1992.
- MacGarrigle, George. *Aleutian Islands: The U.S. Army Campaigns of World War II*. Washington, DC: Department of the Army, 1992.
- Marshall, George C. FM 31-15: *Operations in Snow and Extreme Cold*. Washington, DC: Department of the Army, 1941.
- Mitchell, Robert J. *The Capture of Attu: As Told by the Men who Fought There*. Washington, DC: The War Department, 1944.
- Morton, Louis. *The War in the Pacific: Strategy and Command The First Two Years*. Washington, DC: Department of the Army, 2000.
- Nilsen, Thomas. "Russia says no need for NATO in Arctic, Expands own Military Presence." *Barents Observer*. 22 October 2014. Accessed 3 November 2014. <http://barentsobserver.com/en/security/2014/10/russia-says-no-need-nato-arctic-expands-own-military-presence-22-10>.
- Northern Warfare Training Center. "Home." Last modified not provided. Accessed 12 March 2015. <http://www.wainwright.army.mil/nwtc/index.html>.
- Norwegian Armed Forces. "About Cold Response." Last modified 7 March 2014. Accessed 27 March 2015. <http://mil.no/exercises/coldresponse/Pages/about.aspx>.

- O'Dwyer, Gerard. "Norway Prioritizes High North Equipment." *Defense News*. Last modified 11 March 2015. Accessed 26 March 2015. <http://www.defensenews.com/story/defense/policy-budget/warfare/2015/03/03/norway-russia-arctic-northern-high-north-archer-cv90/24272749/>.
- Perras, Galen Roger. *Stepping Stones to Nowhere: The Aleutian Islands, Alaska, and American Military Strategy, 1867-1945*. Vancouver, BC: UBC Press, 2003.
- Pugliese, David. "Canada Breaking Logjam on Arctic Equipment." *Defense News*. Last modified 11 March 2015. Accessed 26 March 2015. <http://www.defensenews.com/story/defense/land/weapons/2015/03/11/canada-arctic-navy-ships-transport-satellite-polar-surveillance/24318527/>.
- Ruppenthal, Roland G. *Logistical Support of the Armies: Volume 1 May 1941-September 1944*. Washington, DC: Center of Military History, Department of the Army, 1995.
- Schaffer, Ronald. "General Stanley D. Embick: Military Dissenter." *Military Affairs* 37 (October 1973): 89-95.
- Stratemeyer, G. E. *Arctic Manual*. Washington, DC: Department of the Army, 1940.
- STATFOR: Global Intelligence "Russia's Plans for Arctic Supremacy." Last modified 16 January 2015. Accessed 26 March 2015. <http://www.stratfor.com/analysis/russias-plans-arctic-supremacy>.
- The Public's Library and Digital Archive. "Conference on the Limitation of Armament, Washington, November 12, 1921-February 6, 1922." Accessed 5 January 2015. http://www.ibiblio.org/pha/pre-war/1922/nav_lim.html.
- . "FM 31-5: Landing Operations on Hostile Shores." Accessed 8 January 2015. <http://www.ibiblio.org/hyperwar/USA/ref/FM/FM31-5/index.html#contents>.
- Whayne, Tom, and Michael DeBakey. *Cold Injury, Ground Type*. Washington, DC: Department of the Army, 1958.
- United States Government Accountability Office. "Arctic Capabilities-DOD Addressed Many Specified Reporting Elements in Its 2011 Arctic Report but Should Take Steps to Meet Near-and Long-term Needs." Accessed 30 April 2015. <http://www.gao.gov/products/GAO-12-180>.
- Vaughn, Richard V. "Cold Memories: An Examination of U.S. Army Doctrine For Combat In Cold Regions." Master's thesis, Command and General Staff College, 1988.

- Veterans History Project. "Dean E. Galles Interview by Christin Siefert." Accessed 7 February 2015. <http://lcweb2.loc.gov/diglib/vhp/story/loc.natlib.afc2001001.76663/>.
- . "Gerard Vincent Radice Interview by Kevin Haney." Accessed 7 February 2015. <http://lcweb2.loc.gov/diglib/vhp/story/loc.natlib.afc2001001.73953/>.
- . "William Argyl Anderson Interview by Paul LaRue." Accessed 7 February 2015. <http://lcweb2.loc.gov/diglib/vhp/story/loc.natlib.afc2001001.38441/>.
- White House. *National Strategy for the Arctic Region*. Washington, DC: Office of the President of the United States of America, May 2013.
- Wilder, Carol A. "Weather as the decisive factor of the Aleutian Campaign, June 1942-August 1943." Master's thesis, Command and General Staff College, 1993.
- Withers, Benjamin, and Stephen Craig. "The Historical Impact of Preventive Medicine in War." In *Military Preventive Medicine: Mobilization and Deployment, Volume 1*. Washington, DC: Department of the Army, 2003.